

COUNCIL AGENDA: 2-15-05

ITEM: 7.3

Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: Carl W. Mosher
Larry D. Lisenbee

SUBJECT: SEE BELOW

DATE: 2-8-05

Approved

Date

2/9/05

SUBJECT: REPORT ON BIDS AND AWARD OF CONTRACT FOR WATER POLLUTION CONTROL PLANT RELIABILITY IMPROVEMENTS PROJECT, AND ADOPTION OF APPROPRIATION ORDINANCE AND FUNDING SOURCES RESOLUTION AMENDMENTS IN THE SAN JOSE/SANTA CLARA TREATMENT PLANT CAPITAL FUND AND THE SEWAGE TREATMENT CONNECTION FEE FUND

RECOMMENDATION

1. Report on bids and award of contract for the San José/Santa Clara, "WPCP Reliability Improvements Project," to the low bidder, Kiewit Pacific Company, in an amount of \$69,522,000; and approve a contingency in the amount of \$6,952,200 for a total not to exceed amount of \$76,474,200.
2. Reject letter of protest from Shimmick Construction
3. Adopt the following Appropriation Ordinance and Funding Sources Resolution amendments in the San José/Santa Clara Treatment Plant Capital Fund:
 - a. Increase the WPCP Reliability Improvements Project appropriation by \$24,974,200.
 - b. Increase the estimate for Transfers by \$10,000,000.
 - c. Increase the estimate for Earned Revenue by \$3,127,000.
 - d. Decrease the Ending Fund Balance by \$9,147,200.
 - e. Decrease the Salt Marsh Restoration appropriation by \$1,650,000.
 - f. Decrease the Alternative Disinfection appropriation by \$400,000.

- g. Decrease the Inactive Lagoons Bio-Solids Removal appropriation by \$150,000.
 - h. Decrease the Raw Sewage and Effluent Sampling Stations appropriation by \$100,000.
 - i. Decrease the Administration Building and Gate Security Improvements appropriation by \$150,000.
 - j. Decrease the Land Acquisition and Improvements appropriation by \$50,000.
 - k. Decrease the Revised South Bay Action Plan – Industrial Recycle/Reuse appropriation by \$200,000.
4. Adopt the following Appropriation amendments in the Sewage Treatment Plant Connection Fee Fund:
- a. Decrease the Reserve for Treatment Plant Expansion by \$10,000,000.
 - b. Establish a transfer to the San José/Santa Clara Treatment Plant Capital Fund on or about February 15, 2005 in the amount of \$10,000,000.

BACKGROUND

The Water Pollution Control Plant headworks structure provides screening and grit removal for raw sewage entering the treatment processes. This existing structure has been in continuous operation for over 30 years and has no redundancy to allow shutdown for impending major repair and rehabilitation work.

The primary objective of the Reliability Improvement Project is to provide additional wet weather flow capacity and reliability at the Plant's headworks by constructing second headworks. In addition to this, the project will eliminate pumping restrictions at the Plant's Filtration process and will provide an emergency wastewater storage basin.

The current average dry weather design flow capacity for the Plant is 167 million gallons per day (mgd), and the wet weather flow capacity is 271 mgd. These capacity constraints are significant because the Plant has experienced several peak flow events of up to 321 mgd after prolonged rainstorms, and additional peak flow events are expected to occur as flows increase due to new connections. During these high flow events, the Plant's headworks facilities have been overwhelmed by the high flows, resulting in the flooding of the Plant's grounds and some of the utility tunnels. Upon completion of the Reliability Project, the Plant's wet weather hydraulic capacity will be increased to 300 mgd with an additional 100 mgd provided by the emergency basin for an approximate two-hour storage period.

ANALYSIS

Bids were opened on September 9, 2004 for the project. The results of the bids are as follows:

<u>Contractor</u>	<u>City</u>	<u>Bid Amount</u>	<u>Variance Over / (Under)</u> <u>Engineer's Estimate</u>	
			<u>Amount</u>	<u>Percent</u>
Walsh Pacific Construction	Dublin	\$73,500,000	\$21,160,000	40.4%
Shimmick Construction	Hayward	\$71,580,000	\$19,240,000	36.8%
Monterey Mechanical	Oakland	\$71,115,000	\$18,775,000	35.9%
Kiewit Pacific Company.	Concord	\$69,522,000	\$17,182,000	32.8%

Engineer's Estimate**\$52,340,000**

The low base bid submitted by Kiewit Pacific Company is 32.8%, or about \$17 million, above the engineer's estimate and exceeds the budget appropriation of \$55 million for this project. All four bids received exceeded the Engineer's Estimate in the range of 33% to 40% with less than a 6% variance between the four bids submitted. Staff has confirmed that bids were higher than expected because global construction demand has risen sharply in the past few months for many of the primary commodities needed for the project. The underlying factor in these differences is the rapid price escalation of cement, reinforced concrete pipe and steel during the past nine months. These increases have also been reported and confirmed in trade publications such as the *Engineering News Record*. Compounding these price escalations is the high demand for large diameter concrete and steel piping components, which account for nearly 12% of the total budget. Of the four bids received, each relied on quotes from the same pipe manufacturer and greatly exceeded original estimates.

The third low bidder, Shimmick Construction, submitted a letter of protest shortly after the bid opening. Shimmick is protesting on the basis that the two lowest bidders are not responsible and were non-responsive to the City's request for bids. Shimmick Construction's protest incorrectly assumed a base bid would exclude the three optional bid items. The basis of award was clearly stated in the bid package to be the lowest of the base bids, which were to include the optional bid items. Shimmick Construction did not submit any additional information in support of its protest and staff recommends that Council reject the protest as without merit. Shimmick Construction has been notified in writing of the time and place for Council action on its bid protest.

After reviewing the bids submitted, and the appropriated budget, staff initially was prepared to recommend the rejection of all bids due to insufficient funds availability. However, on November 18, 2004, the Treatment Plant Advisory Committee voted to recommend that staff seek an extension of the bid expiration date so that additional time could be gained to further evaluate alternative funding options. In response to this recommendation, staff subsequently requested extension of bids from all bidders to allow the City additional time to research funding alternatives and to accept or reject the bids. Kiewit Pacific and Monterey Mechanical were the only bidders agreeing to an extension on their firm bid price. Extensions of their bids have been obtained through February 15, 2005.

It is staff's opinion that construction prices are not likely to decline in the near term and that additional funding should be allocated for the award of the project. Very few components of the project can be eliminated in order to compensate for the additional funds required. The majority of the increased costs are due to the construction of the second headworks, and this facility is absolutely necessary for reliability and flow constraint relief. An evaluation of potential sources of funds was conducted to identify the additional \$25 million to award the project, provide a standard 10% contingency, and provide funding for construction management.

Rejection of the Shimmick Construction protest and award of the construction contract to Kiewit Pacific is recommended. Staff wishes to note that if Council were to uphold the Shimmick protest as to both Kiewit Pacific and Monterey Mechanical, the only option available would be rejection of all bids, as neither Shimmick nor Walsh agreed to extend their bid prices.

Budget Actions

Staff conducted an extensive evaluation of various funding alternatives for the additional \$25 million required to proceed with this project. The additional funds are recommended to come from a combination of current project reductions and delays, fund balance reserves in the San José/Santa Clara Treatment Plant Capital Fund, additional contributions from the Tributary Agencies, and a transfer from the Sewage Treatment Plant Connection Fee Fund. These funding sources are discussed in detail below.

Current Project Reductions and Delays

Analysis of the current year San José/Santa Clara Treatment Plant Capital Fund projects indicated potential savings of \$2.7 million from multiple projects and are described as follows:

1. Negotiations with the Regional Board and the U.S. Fish and Wildlife Service resolved mitigation requirements on the Salt Marsh Restoration, which will yield a saving of \$1,650,000 in the current year.

2. The design cost for the Alternative Disinfection project has been reduced by \$400,000 due to the expectation that conversion away from gaseous chlorine can be accomplished using much of the current back-up disinfection infrastructure.
3. The Inactive Lagoons Bio-Solids Removal project will be rescheduled and will result in an additional \$150,000 savings for the current year. This is expected to have minimal impact, as strategic talks with regulatory officials can be rescheduled in order to achieve the most economical solution to the removal and disposal of those bio-solids accumulated at the Plant prior to the 1973 Clean Water Act.
4. The Raw Sewage and Effluent Sampling stations project has been awarded for a cost below the budgeted appropriations, allowing a saving of \$100,000.
5. The appropriation for security improvements can be reduced to provide \$150,000 in savings. This appropriation was initially intended for increased security apparatus within the administrative building at the Plant. These changes, however, are secondary to the current capital needs related to Plant operations infrastructure.
6. A saving of \$50,000 is expected in the Land Acquisitions and Improvements appropriation. This appropriation is intended to address the support needs associated with the recent acquisition of Pond A-18. No significant demands are expected in the current fiscal, or until further assessment determines future use for this land, which is not, expected to happen in the next twelve months.
7. The Revised South Bay Action Plan – Industrial Recycle/Reuse appropriation can be reduced to yield \$200,000 in savings in the current year. This appropriation is intended to encourage industrial users to convert to recycled water. Participation over the past years has been limited, and has regularly produced savings. The current year appropriation is projected to have at least \$200,000 in savings with no impact to operations or capital projects.

San José/Santa Clara Treatment Plant Capital Fund Balance

This fund currently has \$22,206,781 appropriated for the FY 2004-05 ending fund balance. The ending fund balance is comprised partially of credits owed to San José and the Tributary Agencies from project savings accumulated from prior years. Of this amount, \$9,147,200 is recommended to be appropriated to the Plant Reliability Improvements Project to cover portions of the City and the Tributary Agencies' additional costs. A reprioritization and evaluation of future projects programmed in the 5-Year Capital Improvement Program will be made and recommendations will be brought forward to Council for consideration in the 2006-2010 Proposed Capital Improvement Program.

Contributions from the Tributary Agencies

The Tributary Agencies' allocated share of the additional \$24,974,200 for the Reliability Improvements Project is 33.6%, or \$8,399,323. Of this amount, \$5,272,323 is on deposit in the Fund Balance, as described in the preceding paragraph, a result of savings from past projects. The remaining balance of \$3,127,000 will be billed to and paid by the agencies this year.

Sewage Treatment Plant Connection Fee Fund Transfer

Monies in the Sewage Treatment Connection Fee Fund may be used for acquisition, construction, reconstruction or enlargement of the Treatment Plant. The Plant Reliability Improvements Project is eligible for funding from this source. Staff recommends that \$10,000,000 be transferred to the Reliability Improvements Project appropriation in the San José/Santa Clara Treatment Plant Capital Fund. This amount represents 19% of San José's total funding for this project. The addition of second, parallel headworks increases the Treatment Plant's capacity and increases reliability and redundancy at the initial stage of the wastewater treatment process.

Strategic Construction Management

Instead of relying solely on consultant services for project construction management, the Water Pollution Control Division will assume the lead role with support services to be provided through the design consultant and the Public Works Department. A separate memo amending the Carollo Engineers consulting agreement is included on this Council agenda.

Project and Budget Implications

Project Implications

As discussed above, in order to fund the Plant Reliability Improvements Project, several other capital projects had to be delayed in the Five-Year Capital Improvement Program. The most significant of these is the Electrical Reliability Improvements Project, a \$63 million project to upgrade and replace the Treatment Plant's aging electrical distribution system. This project will be delayed by four years in order to provide the funding needed to award the Plant Reliability Improvements Project.

The critical components of the Plant's electrical distribution system that are of concern, due to age, are the 4160 Volt Switchgear, high-voltage cables, and the underground duct banks. The majority of the high voltage cables are over thirty years old. The expected design life of cables in normal service is thirty-forty years; however, the Treatment Plant is not considered a normal environment for these cables. Many of them are submerged in groundwater or subject to humid conditions, resulting in corrosion problems and insulation breakdown. Due to these conditions

the actual life expectancy of the cables at the Treatment Plant is considered to be less than thirty years. They are considered to be beyond their useful life and could fail at any time.

The majority of the 4160 Volt switchgear is over thirty years old. The switchgear has an expected design life of thirty years. This equipment is in a more controlled environment and therefore the life expectancy is more predictable and life extension through repair and replacement is more achievable since they are above ground. But they too have reached their original design life.

Failure of critical cables and switchgear can result in variety of problems depending on which cable and switchgear fail. The failure could range from the severe (inability to treat sewage) to the catastrophic (loss of pumping and resultant flooding). Flooding can also result in long-term damage of equipment as equipment is submerged and damaged beyond quick repair.

Due to the critical nature of the headworks facility and the lack of redundancy should it fail, the Plant Reliability Improvements Project has been deemed to be of higher immediate priority. Although the Electrical Reliability Project has been delayed, there are adequate reserve funds available to cover emergency repairs for the next few years. In addition, staff is currently investigating alternative funding strategies for the Electrical Reliability Project with the dual goal of financing the project sooner while minimizing rate increases.

Budget Implications

As part of the 2004-05 Adopted Operating Budget, Council approved a three-year rate increase strategy that increases the sewer service and use fees by up to 4.5% annually. The revenue generated by these fees supports, among other things, San José's portion of projects in the San José/Santa Clara Treatment Plant Capital Fund. The Plant Electrical Reliability Improvements project will necessarily require rate increases beyond the current three-year Council-approved rate increase strategy that extends through 2006-07. In addition, the depletion of the Sewage Treatment Plant Connection Fee Fund for this project will require review and analysis of possible adjustments of Connection Fees.

PUBLIC OUTREACH

An extensive pre-qualifying process was conducted as required for complex City projects estimated to exceed 10 million dollars. The pre-qualification solicitation for this project was listed in the *San José Post Record*, and posted on the City and ESD websites. This extensive solicitation effort yielded several qualified contractors for this project. Notification of the plans and specification availability was also published in the *San José Post Record*, as well as the City and ESD web sites.

Notification of such project was also provided to a standard list of contractor organizations, builder's exchanges, and disadvantaged business organizations during the pre-qualifying and bidding processes.

COST IMPLICATIONS

1. AMOUNT OF RECOMMENDATION: \$76,474,200

2. COST OF PROJECT:

Project Delivery	\$ 4,888,469
Construction	\$69,522,000
Contingency	\$ 6,952,200
Design – Carollo Engineers	\$ 3,450,000
Construction Management Amendment (separate memo)	<u>\$ 2,000,000</u>
TOTAL PROJECT COST	\$86,812,669

Prior Year Expenditures \$ 6,838,469

REMAINING PROJECT COSTS \$79,974,200

3. SOURCE OF FUNDING: 512 – San Jose/Santa Clara Treatment Plant Capital Fund
539 – Sewage Treatment Plant Connection Fee Fund

4 FISCAL IMPACT: This project is consistent with the Council-approved Budget Strategy Economic Recovery section in that it will spur construction spending in our local economy.

COORDINATION

This project and memorandum have been coordinated with the Department of Planning, Building and Code Enforcement, the Department of Public Works, Office of Equality Assurance, the Department of Finance, Risk Management, the City Attorney's Office, and the City Manager's Budget Office and is scheduled to be heard at the February 10, 2005 Treatment Plant Advisory Committee (TPAC) meeting.

BUDGET REFERENCE

Fund #	Appn. #	Appn. Name	Total Appn.	Amt. For Contract	2004-2005 Adopted Capital Budget (Page)	Last Budget Action (Date, Ord. No.)
Remaining Project Costs			\$ 79,974,200			
Current Funding Available						
512	6585	WPCP Reliability Improvements	\$55,000,000	\$76,474,200	V-257	
Total Current Funding Available			\$55,000,000	\$76,474,200		
Additional Funding Recommended						
512	6585	WPCP Reliability Improvements	24,974,200			
Total Funding for Remaining Project Costs			\$79,474,200	\$76,474,200		

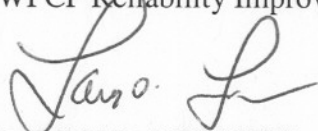
NONDISCRIMINATION

The City of San Jose Non-discrimination Requirements are included in this project as required in Chapter 4.08 of the San Jose Municipal Code.

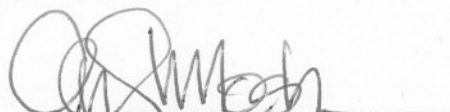
CEQA

Emergency Basin Exempt: File Number, PP03-05-183

WPCP Reliability Improvements Exempt: File Number, PP04-07-217



LARRY D. LISENBEE
Director, Budget Office



CARL W. MOSHER
Director, Environmental Services Department

HONORABLE MAYOR AND CITY COUNCIL

2-8-05

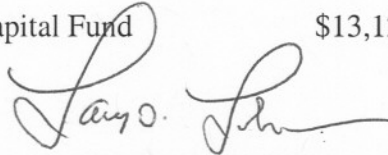
Subject: WPCP Reliability Improvement Project, SJ/SC Capital Fund and Sewage Treatment Connection

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I hereby certify that there will be available for appropriation in the designated fund and in the amounts listed below in Fiscal Year 2004-2005 monies in excess of those heretofore appropriated therefrom:

San José/Santa Clara Treatment Plant Capital Fund

\$13,127,000



LARRY D. LISENBEE

Director, Budget Office

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